q538.7
H36m
no.10

Finland -- Meteorologiska centralanstalt.

SUOMEN VALTION
METEOROLOGINEN KESKUSLAITOS

MAAMAGNEETTISIA TUTKIMUKSIA
Nr. 10.

METEOROLOGISCHE ZENTRALANSTALT
DES
FINNISCHEN STAATES

ERDMAGNETISCHE UNTERSUCHUNGEN
Nr. 10.

RESULTS

OF MAGNETIC OBSERVATIONS IN 1916 IN FINNISH LAPPLAND

BY

J. KERÄNEN

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KUOPIO 1921
O.-Y. KIRJAPAINO SANAN VALTA

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Results of magnetic observations in 1916 in Finnish Lappland.

The present publication forms a continuation of the work of the earlier years in north Finland and contains preliminary reports of observations at 32 stations. Most of the stations lie in the parish of Inari and only the three last, at which observations were taken, in Sodankylä.

Mr. *Y. Latvio* was assistent, as he had been assistent previously in 1913 and 1915.

The outfit consisted of theodolite-magnetometer Chasselon N:o 82, dip circle Dover N:o 229, box chronometer Dent N:o 1919, pocket chronometer Nielsen N:o 11455 and the usual appliancies.

The corrections of the instruments were determined by the author both before and after use at the magnetic observatory at Sodankylä. By means of the matter registred at the observatory it was possible to reduce the results of observations to the epoch 1916.5.

An additional comparison of the constants of horizontal intensity was made in June at the observatory at Pavlovsk.

The constants of the theodolite Chasselon N:o 82 have been measured by Mr. V. Väisälä in 1914 at the observatory at Sodankylä and are published in N:o 9 of this series.

Determinations of corrections and constants.

Declination. From the measurements of the declination at Sodankylä in the table below

Magnet •			Magnet • •		
Date	Observation	Correction	Date	Observation	Correction
13. 6	0° 36′.3	— 2′.4	13. 6	0° 32′.6	— 2′.0
13. 6	34.6	— 1.9	14. 6	35.7	— 1.9
14. 6	37.5	— 1.8	15. 6	35.5	— 2.6
15. 6	35.1	— 2.0	15. 6	28.7	— 1.7
Mean		— 2′.0 ± 0′.1			— 2′.0 ± 0′.2
11. 8	31.1	— 0.5	11. 8	31.1	+ 0.2
12. 8	33.9	— 0.2	12. 8	33.2	— 0.2
15. 8	26.3	+ 0.4	15. 8	29.0	0.0
18. 8	27.2	— 0.1	18. 8	32.8	— 0.2
Mean		— 0′.1 ± 0′.2			— 0′.1 ± 0′.1

is taken the arithmetic mean of corrections for each magnet

magnet •: — 1′.0, magnet • •: — 1′.0

and used at all stations. The east declination is reckoned as positive.

Inclination. There was likewise the mean values of corrections

Needle 1			Needle 2		
Date	Observation	Correction	Date	Observation	Correction
13. 6	75° 22′.7	+ 0′.2	13. 6	75° 21′.5	+ 1′.0
14. 6	26.0	— 1.1	14. 6	24.1	+ 1.0
15. 6	24.8	+ 0.1	15. 6	24.3	+ 0.9
15. 6	23.0	+ 0.8	15. 6	23.0	— 0.1
Mean		0′.0 ± 0′.4			+ 0′.7 ± 0′.3
12. 8	25.8	— 0.2	12. 8	25.0	+ 0.7
13. 8	25.4	— 1.4	13. 8	24.5	— 0.4
14. 8	25.0	+ 1.7	14. 8	25.2	— 0.2
25. 8	26.6	— 0.2	25. 8	25.5	+ 0.9
26. 8	24.9	+ 0.4	26. 8	24.4	— 0.1
Mean		+ 0′.1 ± 0′.5			+ 0′.2 ± 0′.3

for both needles

needle 1: 0′.0; needle 2: + 0′.4

applied at the stations.

Horizontal intensity. From the logaritmic values of the horizontal

Magnet •				Magnet • •			
Date	log A	Date	log A	Date	log A	Date	log A
13. 6	9.40383	11. 8	9.40377	13. 6	9.40343	11. 8	9.40460
13. 6	43	11. 8	93	13. 6	81	11. 8	467
13. 6	55	12. 8	63	14. 6	37	12. 8	386
13. 6	91	12. 8	16	14. 6	49	12. 8	370
14. 6	60	15. 8	84	15. 6	51	15. 8	386
14. 6	84	15. 8	83	15. 6	12	15. 8	415
15. 6	58	28. 8	95	15. 6	410	18. 8	422
15. 6	70	28. 8	436	15. 6	390	18. 8	452
		29. 8	418			28. 8	436
		29. 8	440			28. 8	431
		31. 8	261			9. 9	399
		31. 8	344			9. 9	359
Mean	9.40368 ± 0.00005		9.40376 ± 0.00015		9.40359 ± 0.00010		9.40415 ± 0.00010

constant A for the magnet • obtained at the observatory was deduced the mean

$$\log A = 9.40372$$

and used during the work. As by the magnet •• the determinated values of log A differ too much, it was necessary to refer to each station the values log A by the assumption that it varies linearly with the time.

The determinations of log A at Pavlovsk gave the following results:

Magnet •		Magnet • •	
Date	log A	Date	log A
2. 6	9.40352	2. 6	9.40387
2. 6	59	2. 6	72
3. 6	58	3. 6	69
Mean	9.40356 ± 0.00002		9.40376 ± 0.00006

To these values, obtained by the horizontal intensity, about H = 0.161, must be added a correction for the influence of induction, when we will have the respective values at Sodankylä with H = 0.128. The logaritmic correction of log A for this purpose by both magnets gives $\Delta \log A$ — 0.00006. The corrections of log A at Sodankylä to the standard value at Pavlovsk are

magnet • $\Delta \log A = - 0.00018$
magnet •• „ „ $= + 0.00011$
Mean $\Delta \log A = - 0.00003$,

or about $- 1 \gamma$ in horizontal force. Also the standard values of the horizontal intensity at both observatories are practically the same.

Computations and results.

The material of observations was worket in the same manner as before.

The results are shown in tables I—V.

The reduction was made to the mean values of the year 1916, also to the epoch 1916.5 with the following normal values at Sodankylä:

$$D = 0^\circ\ 34'.6$$
$$I = 75^\circ\ 25'.0$$
$$H = 0.^{\Gamma}12806$$

By the reduction was calculated the correction for the diurnal variation by graphical interpolation from the monthly means of this variation. The correction is therefore very little, while the longitudinal difference between the stations and the standard observatory at Sodankylä is at most only 9^m.

Such values are marked with an asterisk, when during the observation magnetic perturbations appeared.

By means of the reduced values magnetic charts of the elements were made. In the surveyed region there are not such greadly disturbed sites as is general in the north of Finland. The most disturbed station is N:o 12.

The stations N:o 1, 7 and 31 were observed in the year 1913 and in the report of this year reduced to the epoch 1910.5 by means of the observatory at Pavlovsk. A comparison of the values at both epochs affords the following values for the secular variation during 6 years 1910.5—1916.5

	ΔD	ΔI	ΔH
N:o 1	47′.3	11′.0	— 236 γ
7	45.8	13.1	— 238 „
31	47.2	13.3	— 270 „
Pavlovsk [1]	44.2	16.4	— 262 „

It makes the secular variation by D there on an average more, by I and H less than at Pavlovsk.

Descriptions of stations.

The stations are descripted below in the order they were observed.

1. *Törmänen.* On the same point as N:o 32 in the year 1913.

2. *Rahejärvi.* On the shore at the west end of the lake Rahejärvi, 80 metres north of the mouth of a river and 16 metres west of the water's edge.

3. *Nuora-Juhani.* On a point close to lake Inari, covered with small trees, about 100 metres west-southwest of the Lapp house Nuora-Juhani and 20 metres north of the end of the point.

4. *Inari.* In a meadow north-northeast of the personage of Inari, 10 metres from the west shore of lake Inari and 9 metres south of the river Joenjoki.

5. *Peldojärvi.* On the eastern shore of the lake Peldojärvi west-northwest of the Lapp house, 22 metres northeast of the lake and about 150 metres north-northwest of a sound between the land and an island.

6. *Aksujärvi.* In a field 88 metres east of lake Aksujärvi about 30 metres south-southeast of a Lapp sommerhouse, which lies about 1 km north of the south end of the lake.

7. *Toivoniemi.* On the same point as N:o 33 in the year 1913. Repeat station.

8. *Syysjärvi.* On the western shore at the southern end of lake Syysjärvi, about 140 metres west-northwest of the Lapp house Palomaa and 185 metres west of the lake.

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[1] Über die Tätigkeit der russischen geophysikalischen Observatorien. Meteorologische Zeitschrift 1921. H. 8. p. 245.

9. *Tirro.* On the north bank of the river Vaskojoki, 8 metres north of the water's edge on a point of land between the river and small lake west of the Lapp house Tirro.

10. *Lemmenjoki.* In a forest glade on the eastern shore of lake Härkäjärvi near a sound in the centre of the lake, 12 metres east of the lake and 20 metres south of the north end of the sound.

11. *Menesjärvi.* On the eastern shore of the lake Menesjärvi, 10 metres from the water's edge and west of a poor cabin.

12. *Vuopioniemi.* (Tuhka-Sammeli). In a field 6 metres from the north shore, 6 metres of lake Inari and 73 metres southwest of the house Vuopioniemi.

13. *Partakonlahti.* On a high sand knoll at a point on the north shore of the creek Partakonlahti in the lake Inari, about a half km east of the mouth of the river Hietajoki. The place lies 75 metres north-northeast of the end of the point and 10 metres west of the lake.

14. *Iijärvi.* On a sand beach at the south end of the creek Paudivuono in the lake Iijärvi on a neck of land between this lake and the lake Pahkonjärvi. The point is situated 28 metres south of the former lake, 65 metres north of the latter lake and 110 metres east-southeast along the bank of a brook.

15. *Kerttuluobbal.* On the south-western shore of lake Kerttuluobbal, about 1 km southeast of the mouth of the river Näätämönjoki. The station lies on a point 40 metres west and 43 metres south of the lake.

16. *Aarniniemi.* On a point of land west-southwest of the Lapp house Aarniniemi, 9 metres east of the lake. On the eastern side of the point is situated a knoll.

17. *Nitsjärvi.* In a field on the western shore of the island of Siltasaari in lake Nitsjärvi. The station lies 20 metres east of the lake and about 30 metres southwest of an old Lapp house site. To the northwest of the station there are in the lake three small islands.

18. *Järvenpää.* On the heath about 200 metres west-southwest of the inn Järvenpää at the northeast end of the lake Tsjuolisjärvi. The point lies 63 metres north of the landing-place for boats and 55 metres southwest of the lake.

19. *Räkkijärvi.* On an open space 56 metres south-southeast of the house Alatalo on the south bank of lake Räkkijärvi.

20. *Tsjurnovuono.* On a small island in the creek Tsjurnovuono of lake Inari, about 2 km northwest of a small house on the eastern bank of this creek. The point is in the central part of the island 13 metres northwest of the lake.

21. *Kuoskervuono.* On a small island of the eastern coast at the mouth of the creek Kuoskervuono. The island lies southwest of an old house site and the point is situated on the eastern shore 17 metres from the lake.

22. *Tsjärpinsaari.* In a forest on the eastern point of the island Tsjärpinsaaari in the centre of the lake Inari, 17 metres west of the water's edge.

23. *Patsjoenniska.* In a field 155 metres south-southeast of the Lapp house Virranniemi and 50 metres southeast of the river.

24. *Patsjoki.* On the north bank of the river Patsjoki, 19 metres north of the mouth of the brook Harrioja. The station lies near the head of the rapid Kalliokoski.

25. *Kivijärvi.* In a forest glade, 50 metres north-northeast of the old chapel at the south end of lake Kivijärvi and 65 metres east of the lake.

26. *Tsjarminiemi.* On a point, which is in the centre of the creek on the western side of the peninsula Tsjarminiemi. The point lies 14 metres east of the end of the land.

27. *Kattojärvi.* In a field 43 metres south-southwest of a deserted house on the western shore of lake Kattojärvi. The station lies 42 metres west of the lake.

28. *Nangujärvi.* In a field 105 metres east of the Lapp house, which is situated on a cape between lake Nangujärvi and the river Nangujoki and 95 metres northeast of the river.

29. *Laanila.* On an open space south of the inn Laanila, 100 metres south of the rill by the inn and 38 metres west of the road.

30. *Tankajoki.* On an open space southeast of the inn Tankajoki, 280 metres along the road northeast of the bridge, which crosses the small river Tankajoki and 49 metres southeast of the road.

31. *Mutenia.* On the same point as N:o 31 in the year 1913. Repeat station.

32. *Vuotso.* In a forest glade 80 metres south-southeast of the Hetta inn at the Lapp hamlet Vuotso.

The chart of isogones shows the distribution of the described stations.

* * *

I. Results of astronomical observations.

Station	Date	ΔU to mean Greenwich time	ΔU_m	A_0	A_{0m}	ΔA_0
1	20. 6 a	— 1^{h}32^m 50.^{s}7	— 1^{h}32^m 54.^{s}7	177° 49.′6	177° 49.′0	± 0.′4
		58. 7		48. 5		
2	21. 6 p	48. 3	48. 1	166 55. 0	166 55. 1	0. 1
		47. 9		55. 3		
3	22. 6 a	47. 0	47. 0	163 30. 6	163 30. 9	0. 3
		46. 9		31. 2		
4	23. 6 p	49. 1	48. 6	172 7. 5	172 7. 6	0. 0
		48. 1		7. 6		
5	27. 6 a	44. 4	44. 4	180 35. 6	180 35. 9	0. 3
		44. 4*		36. 4*		
6	27. 6 p	44. 2	44. 7	229 10. 2	229 10. 1	0. 1
		45. 1		10. 0		
7	29. 6 a	42. 0	39. 0	43 40. 4	43 41. 3	1. 0
		36. 1		42. 3		
8	30. 6 a	52. 5	52. 6	96 12. 3	96 12. 4	0. 1
		52. 8		12. 5		
9	2. 7 p	57. 3	58. 9	277 55. 9	277 55. 6	0. 3
		60. 5		55. 3		
10	3. 7 p	60. 1	59. 6	237 30. 6	237 30. 8	0. 2
		59. 0		31. 0		
11	4. 7 p	— 1 33 16. 7	— 1 33 15. 6	217 31. 2	217 31. 4	0. 2
		14. 5		31. 5		
12	6. 7 p	4. 5*	6. 5	180 13. 2*	180 12. 3	0. 6
		7. 5		11. 9		
13	7. 7 p	11. 9	11. 8	192 20. 8	192 20. 9	0. 0
		11. 6		20. 9		
14	9. 7 p	15. 1	13. 6	27 38. 3	27 38. 0	0. 2
		12. 1		37. 8		
15	9. 7 p	28. 9	20. 8	52 40. 4	52 42. 5	2. 1
		12. 7		44. 6		
16	10. 7 p	22. 9	21. 1	196 22. 0	196 22. 5	0. 6
		19. 3		23. 1		
17	11. 7 p	18. 9	18. 9	190 46. 5	190 46. 4	0. 1
		18. 9		46. 3		
18	12. 7 p	20. 8	20. 7	142 44. 5	142 44. 6	0. 1
		20. 4*		44. 7*		
19	13. 7 p	20. 8	21. 8	240 27. 6	240 27. 3	0. 3
		22. 8		27. 0		
20	15. 7 a	23. 1	21. 2	152 17. 9	152 18. 6	0. 7
		19. 3		19. 3		
21	15. 7 p	26. 7	25. 6	26 7. 0	26 7. 3	0. 2
		24. 5		7. 5		
22	16. 7 a	21. 1		106 47. 6		
		17. 1	16. 4	46. 1	106 47. 2	0. 5
		10. 9		47. 9		
23	17. 7 a	28. 4	26. 0	28 1. 0	28 1. 6	0. 6
		23. 6		2. 2		
24	17. 7 p	28. 6	26. 0	63 4. 7	63 4. 9	0. 2
		23. 5		5. 1		
25	19. 7 p	18. 3*	22. 1	250 60. 6*	250 59. 0	1. 1
		24. 1		58. 2		
26	20. 7 p	22. 6		210 36. 0		
		21. 4	21. 7	35. 7	210 35. 9	0. 1
		20. 3*		36. 2*		
27	21. 7 p	9. 4*	7. 7	11 48. 3*		
		6. 9		47. 5	11 48. 2	0. 4
	22. 7 a	6. 5	6. 6	49. 2*		
		6. 7		48. 5		
28	22. 7 p	9. 7	8. 0	192 26. 6	192 27. 2	0. 6
		6. 2		27. 8		
29	25. 7 a	59. 6*		1 16. 6*		
		0. 7	3. 0	16. 4	1 16. 0	0. 3
		7. 0		15. 2		
		2. 7*		16. 0*		
30	25. 7 p	18. 1	15. 8	211 1. 9	211 2. 6	0. 6
		13. 4		3. 2		
31	26. 7 p	— 1 32 60. 3	59. 4	269 32. 2		
		58. 6		32. 5	269 32. 3	0. 1
	27. 7 a	57. 1	57. 7	32. 2		
		58. 3		32. 2		
32	27. 7 p	— 1 37 21. 1	— 1 37 19. 8	10 18. 2	10 18. 5	0. 3
		18. 5		18. 8		

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*) Series with two pointings on the sun taken into account with the half weight.

II. Declination.

Station	Date	Mean Greenwich time	Magnet	D (+ E)	Correction	Reduction	D1916.5	ΔD
1	20. 6	5h 56m — 70m	• •	2° 3.'8	— 1.'0	— 4.'5	1° 58.'3*	+ 0.'0
		6 13 — 26	•	0. 8	"	— 1. 4	58. 4*	
2	21. 6	7 45 — 57	• •	1 31. 6	"	— 1. 2	1 29. 4	0. 8
		8 1 — 14	•	34. 8	"	— 2. 8	31. 0	
3	22. 6	5 7 — 20	• •	2 16. 2	"	— 6. 8	2 8. 4	0. 0
		5 26 — 40	•	17. 1	"	— 7. 6	8. 5	
4	23. 6	15 34 — 44	• •	1 7. 6	"	+ 11. 7	1 18. 3	0. 1
		16 39 — 50	•	10. 8	"	+ 8. 9	18. 7	
		16 54 — 64	• •	10. 3	"	+ 9. 1	18. 4	
5	27. 6	8 45 — 56	•	1 14. 2	"	+ 1. 1	1 14. 3	0. 1
		9 0 — 11	• •	12. 2	"	+ 2. 9	14. 1	
6	27. 6	19 2 — 15	• •	1 22. 4	"	+ 6. 5	1 27. 9	0. 4
		19 20 — 30	•	23. 2	"	+ 6. 5	28. 7	
7	29. 6	5 5 — 17	• •	1 27. 5	"	— 7. 4	1 19. 1*	0. 8
		9 21 — 32	•	17. 4	"	+ 3. 0	19. 4*	
	1. 7	6 27 — 39	•	35. 1	"	— 12. 6	21. 5*	
8	30. 6	4 31 — 44	•	1 46. 3	"	— 6. 4	1 38. 9	0. 0
		4 51 — 86	• •	47. 0	"	— 7. 0	39. 0	
9	2. 7	16 6 — 17	• •	0 21. 6	"	+ 4. 9	0 25. 5	0. 2
		16 22 — 33	•	18. 2	"	+ 7. 8	25. 0	
10	3. 7	15 20 — 30	•	0 17. 8	"	+ 4. 2	0 21. 0	0. 2
		15 34 — 43	• •	18. 1	"	+ 3. 6	20. 7	
11	4. 7	13 54 — 64	• •	1 21. 2	"	+ 14. 4	1 34. 6	0. 0
		14 9 — 18	•	21. 8	"	+ 13. 7	34. 5	
12	6. 7	18 18 — 29	•	— 0 40. 6	"	+ 8. 4	— 0 33. 2	0. 4
		18 33 — 45	• •	43. 5	"	+ 10. 4	34. 1	
13	7. 7	14 8 — 19	• •	2 6. 3	"	+ 6. 3	2 11. 6	0. 5
		14 23 — 34	•	7. 7	"	+ 5. 9	12. 6	
14	9. 7	11 40 — 51	•	2 1. 5	"	+ 7. 8	2 8. 3*	1. 9
		12 44 — 55	• •	8. 0	"	+ 5. 1	12. 1*	
15	9. 7	18 49 — 60	• •	2 30. 4	"	+ 3. 0	2 32. 4	3. 0
	10. 7	5 40 — 51	•	44. 6	"	— 5. 2	38. 4*	
16	10. 7	16 18 — 30	• •	3 31. 3	"	+ 1. 5	3 31. 8	1. 2
		17 59 68	•	25. 6	"	+ 4. 8	29. 4*	
17	11. 7	14 6 — 15	•	2 30. 0	"	+ 5. 2	2 34. 2	0. 9
		15 36 — 45	• •	27. 7	"	+ 5. 7	32. 4	
18	12. 7	14 8 — 19	• •	2 42. 2	"	+ 5. 2	2 46. 4	0. 8
		16 18 — 26	•	44. 1	"	+ 4. 9	48. 0	
19	13. 7	16 47 — 56	• •	3 35. 9	"	+ 3. 9	3 38. 8	0. 4
		17 42 — 52	•	35. 8	"	+ 4. 7	39. 5	
20	15. 7	4 57 — 69	•	2 52. 9	"	— 7. 1	2 44. 8	0. 2
		7 37 — 48	• •	49. 1	"	— 2. 9	45. 2	
21	15. 7	13 46 — 58	• •	2 45. 5	"	+ 4. 3	2 48. 8	1. 0
		15 47 — 56	•	48. 4	"	— 0. 5	46. 9	
22	16. 7	4 34 — 45	• •	2 13. 5	"	— 6. 5	2 6. 0	0. 4
		5 17 — 29	•	11. 8	"	— 5. 5	5. 3	
23	17. 7	4 31 — 43	•	2 57. 3	"	— 7. 7	2 48. 6	0. 2
		6 15 — 24	• •	53. 3	"	— 4. 0	48. 3	
24	17. 7	13 23 — 32	• •	2 39. 6	"	+ 8. 6	2 47. 2	2. 8
		15 8 — 18	•	32. 5	"	+ 10. 2	41. 7*	
25	19. 7	12 18 — 28	• •	2 36. 3	"	+ 14. 0	2 49. 3	0. 4
		15 17 — 31	•	45. 2	"	+ 5. 8	50. 0	
26	20. 7	13 58 — 68	•	1 56. 7	"	+ 3. 3	1 59. 0	0. 6
		15 34 — 43	• •	56. 6	"	+ 2. 1	57. 7	
27	21. 7	17 26 — 37	• •	2 7. 7	"	+ 3. 9	2 10. 6	0. 4
		19 33 — 45	• •	7. 0	"	+ 3. 8	9. 8	
28	22. 7	13 53 — 63	•	2 18. 9	"	+ 2. 5	2 20. 4	3. 0
		14 49 — 59	• •	21. 4	"	+ 6. 1	26. 5	
29	25. 7	5 40 — 85	• •	1 37. 6	"	— 6. 4	1 30. 2	0. 1
		6 29 — 41	•	36. 9	"	— 5. 9	30. 0	
30	25. 7	14 34 — 43	•	1 47. 3	"	+ 5. 7	1 52. 0	0. 0
		15 10 — 21	• •	47. 4	"	+ 5. 6	52. 0	
31	26. 7	15 0 — 12	• •	0 44. 3	"	+ 3. 7	0 47. 0	2. 7
		16 17 — 27	•	47. 0	"	+ 0. 4	46. 4	
	27. 7	4 34 — 45	• •	0 45. 4	"	— 7. 4	0 37. 0	
		5 57 — 68	• •	45. 0	"	— 6. 3	37. 7	
32	27. 7	14 24 — 37	•	1 45. 9	"	+ 5. 1	1 50. 0	0. 4
		16 17 — 24	• •	51. 9	"	0. 0	50. 9	

III. Inclination.

Station	Date	Mean Greenwich time	Needle	I_A	I_B	I	Correction	Reduction	$I_{1916.5}$	ΔI
1	20. 6	9^h 52^m — 62^m	1	75° 62.′4	56.′8	75° 59.′6	0.′0	— 1.′0	75° 58.′6	+ 0.′2
		10 5 — 14	2	62. 4	58. 0	60. 2	+ 0. 4	— 2. 5	58. 1	
2	21. 6	11 0 — 11	1	76 8. 9	2. 2	76 5. 6	0. 0	— 1. 0	76 4. 6	0. 2
		11 13 — 21	2	6. 8	2. 7	4. 8	+ 0. 4	— 1. 1	4. 1	
3	22. 6	9 5 — 20	1	75 62. 6	57. 2	75 59. 9	0. 0	— 1. 4	75 58. 5	0. 2
		9 24 — 36	2	59. 4	58. 6	59. 0	+ 0. 4	— 1. 4	58. 0	
4	23. 6	7 36 — 49	1	76 19. 2	8. 1	76 13. 7	0. 0	— 2. 1	76 11. 6	0. 8
		7 51 — 62	2	13. 5	9. 8	11. 7	+ 0. 4	— 2. 9	9. 2	
		10 7 — 16	2	12. 2	8. 8	10. 5	+ 0. 4	— 1. 9	9. 0	
5	27. 6	10 17 — 28	1	76 16. 8	9. 0	76 12. 9	0. 0	— 1. 1	76 11. 8	0. 3
		10 30 — 39	2	13. 8	9. 1	11. 4	+ 0. 4	— 0. 6	11. 2	
6	28. 6	7 58 — 68	1	76 22. 5	15. 8	76 19. 1	0. 0	— 1. 0	76 18. 1	0. 2
		8 10 — 20	2	21. 4	17. 1	19. 2	+ 0. 4	— 1. 2	18. 4	
7	29. 6	9 50 — 68	1	76 14. 6	11. 2	76 12. 9	0. 0	+ 0. 4	76 13. 3	0. 3
		9 58 — 73	2	14. 4	11. 4	12. 9	+ 0. 4	+ 0. 9	12. 4	
	1. 7	6 52 — 62	1	19. 9	11. 6	15. 8	0. 0	— 3. 4	12. 4*	
8	30. 6	9 16 — 26	1	76 14. 6	5. 4	76 10. 0	0. 0	— 0. 2	76 9. 8	0. 4
		10 0 — 14	2	11. 9	10. 1	11. 0	+ 0. 4	— 0. 8	10. 6	
9	2. 7	15 17 — 26	1	76 14. 9	9. 8	76 12. 3	0. 0	+ 1. 5	76 13. 8	0. 8
		15 28 — 36	2	11. 8	8. 8	10. 2	+ 0. 4	+ 1. 5	12. 1	
10	3. 7	12 46 — 56	1	76 10. 5	5. 1	76 7. 8	0. 0	+ 0. 2	76 8. 0	0. 4
		13 5 — 14	2	11. 2	4. 9	8. 0	+ 0. 4	+ 0. 5	8. 9	
11	4. 7	11 7 — 18	1	75 63. 1	57. 1	76 0. 1	0. 0	+ 7. 5	76 7. 6*	0. 2
		11 20 — 29	2	63. 9	62. 2	3. 1	+ 0. 4	+ 3. 6	7. 1*	
12	6. 7	20 0 — 13	1	76 42. 4	33. 4	76 37. 9	0. 0	+ 0. 1	76 38. 0*	2. 7
		20 15 — 25	2	44. 4	45. 8	45. 1	+ 0. 4	— 1. 2	44. 3*	
	7. 7	6 7 — 18	1	28. 1	33. 6	30. 8	0. 0	+ 0. 1	30. 9	
		6 21 — 31	2	38. 8	35. 4	37. 1	+ 0. 4	0. 0	37. 5	
13	7. 7	11 27 — 39	1	76 22. 8	19. 2	76 21. 0	+ 0. 4	— 1. 4	76 20. 0	0. 0
		11 42 — 52	2	26. 2	18. 3	22. 3	0. 0	— 0. 4	21. 9	
14	8. 7	20 53 — 64	2	76 44. 9	41. 3	76 43. 1	0. 0	— 25. 9	76 17. 2*	0. 4
		21 6 — 17	1	43. 1	39. 7	41. 4	+ 0. 4	— 25. 5	16. 3*	
15	10. 7	4 20 — 32	1	76 35. 4	29. 4	76 32. 4	0. 0	— 1. 9	76 30. 5	0. 7
		4 34 — 45	2	33. 6	29. 0	31. 3	+ 0. 4	+ 0. 2	31. 9	
16	10. 7	18 26 — 37	1	76 34. 3	23. 9	76 29. 1	0. 0	+ 2. 9	76 32. 0	0. 8
		18 39 — 48	2	29. 8	26. 1	27. 9	+ 0. 4	+ 2. 1	30. 4	
17	11. 7	13 33 — 43	1	76 22. 1	16. 5	76 19. 3	0. 0	+ 1. 7	76 21. 0	0. 4
		13 44 — 53	2	20. 4	16. 9	18. 7	+ 0. 4	+ 2. 7	21. 8	
18	12. 7	13 28 — 39	1	76 27. 2	21. 0	76 24. 1	0. 0	+ 3. 4	76 27. 5	0. 3
		13 41 — 52	2	24. 0	18. 9	21. 4	+ 0. 4	+ 4. 7	26. 5	
		17 13 — 23	1	29. 6	21. 2	25. 4	0. 0	+ 2. 8	28. 2	
19	13. 7	18 44 — 55	1	76 58. 4	49. 4	76 53. 9	0. 0	+ 3. 6	76 57. 5	0. 6
		18 57 — 68	2	55. 4	54. 7	55. 1	+ 0. 4	+ 3. 2	58. 7	
20	15. 7	8 3 — 16	1	76 24. 9	20. 8	76 22. 8	0. 0	— 0. 8	76 22. 0	1. 3
		8 19 — 30	2	19. 9	16. 9	18. 4	+ 0. 4	— 0. 2	18. 6	
		8 34 — 44	1	20. 8	15. 1	18. 0	0. 0	— 0. 1	17. 9	
21	15. 7	13 11 — 21	1	76 15. 1	9. 5	76 12. 3	0. 0	+ 1. 9	76 14. 2	0. 2
		13 24 — 33	2	13. 4	9. 7	11. 5	+ 0. 4	+ 1. 9	13. 8	
22	16. 7	7 58 — 68	1	76 21. 2	15. 6	76 18. 4	0. 0	— 1. 1	76 17. 3	0. 0
		8 10 — 19	2	19. 9	16. 2	18. 1	+ 0. 4	— 1. 3	17. 2	
23	17. 7	6 37 — 48	1	76 21. 0	12. 7	76 16. 8	0. 0	— 0. 4	76 16. 4	0. 1
		6 50 — 58	2	17. 6	14. 7	16. 2	+ 0. 4	— 0. 4	16. 2	
24	17. 7	12 47 — 57	1	76 6. 1	0. 7	76 3. 4	0. 0	+ 8. 3	76 11. 7*	1. 0
		12 59 — 68	2	3. 4	0. 6	2. 0	+ 0. 4	+ 7. 3	9. 7*	
25	19. 7	11 39 — 51	1	75 42. 6	34. 9	75 38. 8	0. 0	— 0. 4	75 38. 4	0. 0
		11 54 — 64	2	40. 4	35. 6	38. 0	+ 0. 4	0. 0	38. 4	
26	20. 7	16 21 — 30	1	76 7. 6	1. 4	76 4. 5	0. 0	+ 1. 0	76 5. 5	0. 9
		16 32 — 42	2	6. 5	5. 2	5. 9	+ 0. 4	+ 1. 0	7. 3	
27	21. 7	20 42 — 52	1	75 52. 9	49. 0	75 51. 0	0. 0	+ 2. 4	75 53. 4	0. 4
		20 54 — 66	2	51. 3	47. 8	49. 5	+ 0. 4	+ 2. 8	52. 6	
28	22. 7	13 6 — 17	1	76 11. 9	7. 6	76 9. 8	0. 0	+ 0. 5	76 10. 3	1. 5
		13 20 — 29	2	3. 4	7. 5	5. 5	+ 0. 4	+ 0. 4	6. 3	
		13 32 — 42	1	11. 8	7. 2	9. 5	0. 0	+ 1. 8	11. 3	
29	25. 7	9 23 — 32	1	75 60. 4	55. 4	75 57. 9	0. 0	— 0. 8	75 57. 1	0. 2
		9 35 — 44	2	58. 1	56. 6	57. 3	+ 0. 4	— 0. 8	56. 9	
30	25. 7	16 49 — 61	1	75 50. 2	44. 2	75 47. 2	0. 0	+ 3. 3	75 50. 5	0. 5
		17 3 — 13	2	46. 9	45. 4	46. 1	+ 0. 4	+ 3. 0	49. 5	
31	26. 7	14 19 — 31	1	75 51. 3	44. 9	75 48. 1	0. 0	+ 3. 0	75 51. 1	0. 2
		14 33 — 46	2	48. 1	48. 1	48. 1	+ 0. 4	+ 3. 0	51. 5	
	27. 7	7 0 — 10	1	53. 9	49. 7	51. 8	0. 0	— 0. 4	51. 4	
		7 13 — 21	2	52. 3	48. 6	50. 4	+ 0. 4	— 0. 4	50. 4	
32	27. 7	16 41 — 52	1	76 11. 6	5. 4	76 8. 5	0. 0	+ 2. 4	76 10. 9	0. 6
		16 55 — 63	2	8. 9	4. 1	6. 5	+ 0. 4	+ 2. 8	9. 7	

IV. Horizontalintensity.

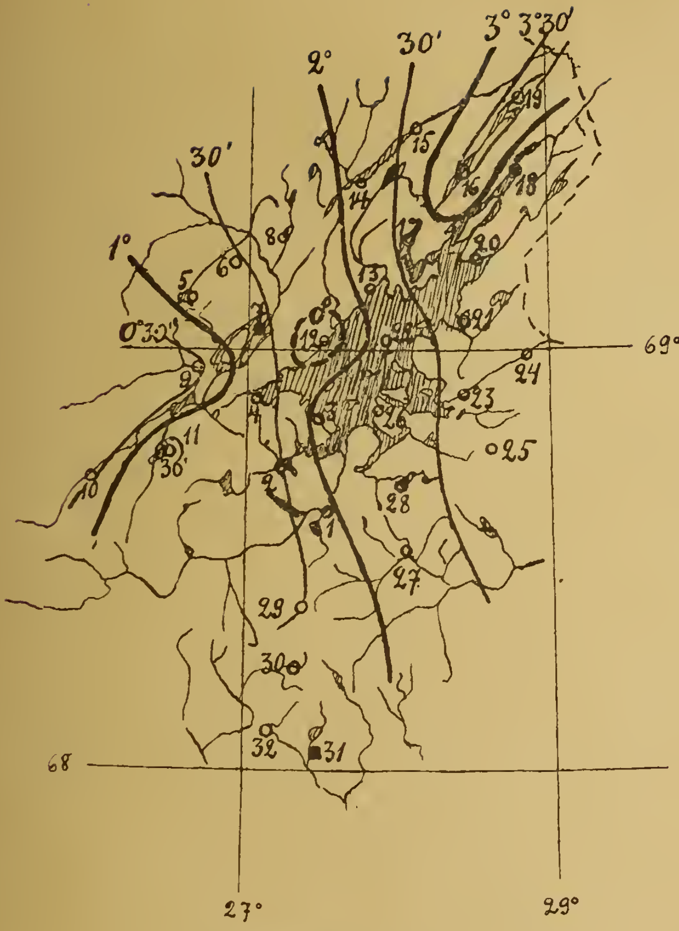
Station	Date	Mean Greenwich time	Magnet	T	v	t	ι	Δ	s	H	M	Reduction	$H_{1916.5}$	ΔH
1	20. 6	7^h 19^m — 38^m	•	$3.^s3538$	21°29.′8	16°.8	19°.2	14.5	+ $0^s.8$	0.12471	0.18034	+ 33γ	0.12504	± 3γ
		7 40 — 58	•	462	30. 8	17.6	18.6	14.5	"	500	60	+ 12	12	
		8 2 — 24	• •	3. 3529	21 21. 0	16.9	19.3	16.0	"	512	83	— 11	01	
		8 24 — 40	• •	08	20. 5	19.4	19.5	16.0	"	27	7800	— 12	15	
2	21. 6	9 19 — 42	•	3. 3615	21 31. 2	22.8	26.4	15.5	"	0.12430	0.18050	+ 2	0.12432	6
		9 43 — 60	•	31	30. 5	25.0	25.8	15.5	"	34	36	— 2	32	
		10 4 — 26	• •	3. 3709	21 30. 4	24.0	22.9	16.0	"	08	7977	0	08	
		10 27 — 44	• •	693	28. 8	22.6	23.1	16.0	"	19	76	0	19	
3	22. 6	7 22 — 42	•	3. 3561	21 13. 6	19.4	19.6	16.0	"	0.12541	0.17918	+ 5	0.12546	6
		7 44 — 60	•	34	13. 2	19.0	19.5	16.0	"	52	31	+ 9	61	
		8 3 — 26	• •	3. 3534	21 12. 1	19.0	21.2	15.0	"	52	18	+ 18	70	
		8 27 — 43	• •	68	12. 2	22.9	22 1	15.0	"	45	23	+ 24	69	
4	23. 6	11 44 — 76	•	3. 3807	21 28. 0	24.3	24.2	14.5	"	0.12383	0.17955	— 8	0.12375	4
		12 17 — 34	•	798	30. 1	24.0	24.5	14.5	"	76	42	— 14	62	
		12 40 — 59	• •	3. 3789	21 29. 9	24.1	25.4	14.8	"	76	36	— 13	63	
		13 0 — 18	• •	58	29. 2	25.4	25.7	14.8	"	93	20	— 40	53	
5	27. 6	7 26 — 42	•	3. 3840	21 38. 0	19.6	21.1	11.0	"	0.12324	0.17946	+ 17	0.12341	3
		7 46 — 64	•	51	38. 9	22.8	22.1	11.0	"	21	49	+ 16	37	
		9 22 — 42	• •	3. 3876	21 37. 8	25.4	26.4	15.5	"	10	47	+ 38	48	
		9 44 — 60	• •	932	37. 4	27.4	26.8	15.5	"	295	20	+ 35	30	
6	28. 6	6 22 — 44	•	3. 3954	21 52. 9	12.6	13.2	12.5	— 1.6	0.12219	0.17927	+ 26	0.12245	6
		6 46 — 62	•	77	53. 8	13.6	13.5	12.5	"	08	20	+ 27	35	
		7 6 — 26	• •	3. 4008	21 51. 0	13.8	14.5	12.2	"	35	43	+ 26	61	
		7 28 — 44	• •	03	50. 0	15.6	15.2	12.2	"	15	04	+ 26	41	
7	29. 6	5 53 — 76	• •	3. 3783	21 32. 4	14.8	15.4	14.8	"	0.12372	0.17900	— 4	0.12368	3
		6 18 — 34	• •	78	32. 4	15.2	15.6	14.8	"	74	06	— 2	72	
		7 21 — 42	•	3. 3811	21 37. 0	15.4	15.0	14.8	"	43	13	+ 22	65	
		7 43 — 60	•	762	37. 0	15.2	15.3	14.8	"	60	38	+ 18	78	
	1. 7	5 36 — 57	•	3. 3828	21 35. 8	16.8	17.6	13.0	— 3.4	40	09	+ 34	74	
		5 58 — 74	•	06	34. 4	18.6	19.1	13.0	"	55	10	+ 28	83	
8	30. 6	5 54 — 76	•	3. 3764	21 36. 8	18.0	17.6	14.2	"	0.12365	0.17953	+ 3	0.12364	1
		6 17 — 33	•	801	36. 0	20.2	18.8	14.2	"	53	44	+ 8	61	
		8 2 — 24	• •	3. 3848	21 35. 1	24.0	24.9	14.5	"	34	35	+ 30	64	
		8 26 — 44	• •	48	33. 6	25.7	25.4	14.5	"	43	35	+ 17	60	
9	2. 7	16 40 — 61	•	3. 3844	21 31. 2	30.2	27.7	12.2	"	0.12360	0.17944	— 37	0.12323	2
		17 2 — 20	•	48	31. 2	26.7	26 6	12.2	"	54	34	— 24	30	
		17 24 — 44	• •	3. 3878	21 27. 9	28.0	26.9	14.0	"	60	14	— 35	25	
		17 44 — 61	• •	60	27. 9	27.1	26.5	14.0	"	66	05	— 43	23	
10	3. 7	13 26 — 52	• •	3. 3882	21 29. 5	27.0	28.2	11.5	"	0.12348	0.17915	— 10	0.12338	2
		13 54 — 70	• •	90	29. 2	27.6	28.0	11.5	"	48	03	— 19	29	
		14 40 — 58	•	3. 3830	21 25. 0	31.3	30.6	14.0	"	90	29	— 60	30	
		14 58 — 74	•	55	23. 8	31.0	30.0	14.0	"	87	20	— 55	32	
11	4. 7	11 50 — 72	•	3. 3932	21 27. 9	31.4	29.4	14.0	"	0.12343	0.17882	+ 21	0.12364	3
		12 14 — 32	•	854	29. 0	28.5	28.4	14.0	"	62	904	— 1	61	
		12 39 — 61	• •	3. 3833	21 26. 1	28.1	27.2	15.2	"	85	02	— 9	76	
		13 2 — 19	• •	42	25. 0	27.0	26.7	15.2	"	86	894	— 17	69	
12	6. 7	17 0 — 16	• •	3. 4328	22 5. 0	24.5	23.6	10.5	"	0.12037	0.17877	— 95	0.11942*	8
		17 18 — 36	• •	14	6. 5	22.6	23.3	10.5	"	32	901	— 66	66*	
		19 0 — 18	•	3. 4439	22 13. 2	23.0	21.9	12.5	"	1961	867	— 23	38	
		19 19 — 37	•	83	14. 8	20.8	31.4	12.5	"	36	55	— 7	29	
13	7. 7	12 10 — 32	•	3. 4080	21 38. 8	28.4	28.8	10.8	"	0.12235	0.17876	+ 14	0.12249	1
		12 34 — 56	•	22	40. 5	28.7	28.9	10.8	"	48	910	+ 5	53	
		13 38 — 58	• •	28	36. 1	27.0	27.6	15.2	"	66	864	— 17	49	
14	9. 7	6 14 — 30	• •	3. 4256	22 4. 2	10.8	11.0	8.8	— 1.3	0.12066	0.17856	+ 120	0.12186*	10
		6 31 — 48	• •	43	2. 0	11.4	11.3	9.2	"	81	23	+ 61	42*	
		7 0 — 30	•	3. 4167	21 54. 6	11.8	12.0	14 0	"	138	798	+ 42	80*	
		7 31 — 58	•	096	55. 5	12.4	12.2	12.2	"	59	846	+ 16	75*	
15	9. 7	19 39 — 58	• •	3. 4173	22 0. 1	10.5	11 0	14.0	"	0.12112	0.17833	— 10	0.12102*	5
		8 0 — 18	• •	203	1. 2	10.6	10.9	14.0	"	096	38	— 5	091*	
	10. 7	5 54 — 74	•	3. 4160	22 0. 9	11.2	11.5	11.5	"	111	67	+ 0	111	
		6 15 — 31	•	76	0. 6	11.6	11.7	11.5	"	107	60	+ 7	114	
16	10. 7	16 36 — 58	• •	3. 4212	21 48. 0	22.9	23.1	11.0	"	0.12150	0.17842	— 19	0.12131*	11
		16 59 — 75	• •	018	45. 1	23.0	23.3	11.0	"	232	96	— 60	72*	
		17 20 — 38	•	3. 3958	21 40. 5	22.1	21.6	9.0	"	75	98	— 113	62*	
		17 40 — 56	•	4145	44. 4	21.4	21.8	9.0	"	188	46	— 61	27*	
17	11. 7	14 19 — 38	•	3. 4017	21 37. 2	26.8	26.4	12.5	"	0.12266	0.17877	— 24	0.12242	1
		14 39 — 54	•	3987	34. 0	26.6	26.5	12.5	"	91	67	— 47	44	
		14 59 — 78	• •	3. 4002	21 35. 2	26.4	26.4	15.0	"	81	62	— 37	44	
		15 19 — 34	• •	3997	36. 6	26.1	26.4	15.0	"	76	80	— 30	46	
18	12. 7	14 24 — 44	• •	3. 3920	21 26. 1	26.4	26.4	12.2	"	0.12353	0.17854	— 85	0.12268*	4
		14 44 — 60	• •	843	26. 2	26.2	26.4	12.2	"	80	81	— 111	69*	
		16 29 — 47	•	3. 3960	21 33. 5	22.0	22 9	14.0	"	01	56	— 50	51	
		16 48 — 62	•	67	34. 4	23.1	23.4	14.0	"	296	71	— 38	58	
19	13. 7	17 1 — 21	• •	3. 4697	22 38. 6	15.7	17.1	13.2	— 0.4	0.11765	0.17852	— 52	0.11713	4
		17 22 — 36	• •	721	38. 5	18.0	17.7	13.2	"	61	51	— 51	10	
		17 55 — 74	•	3. 4699	22 36. 8	18.9	18.2	13.0	"	76	59	— 50	26	
		18 15 — 32	•	703	36. 5	16.0	17.4	13.0	"	72	48	— 51	21	

IV. Horizontalintensity.

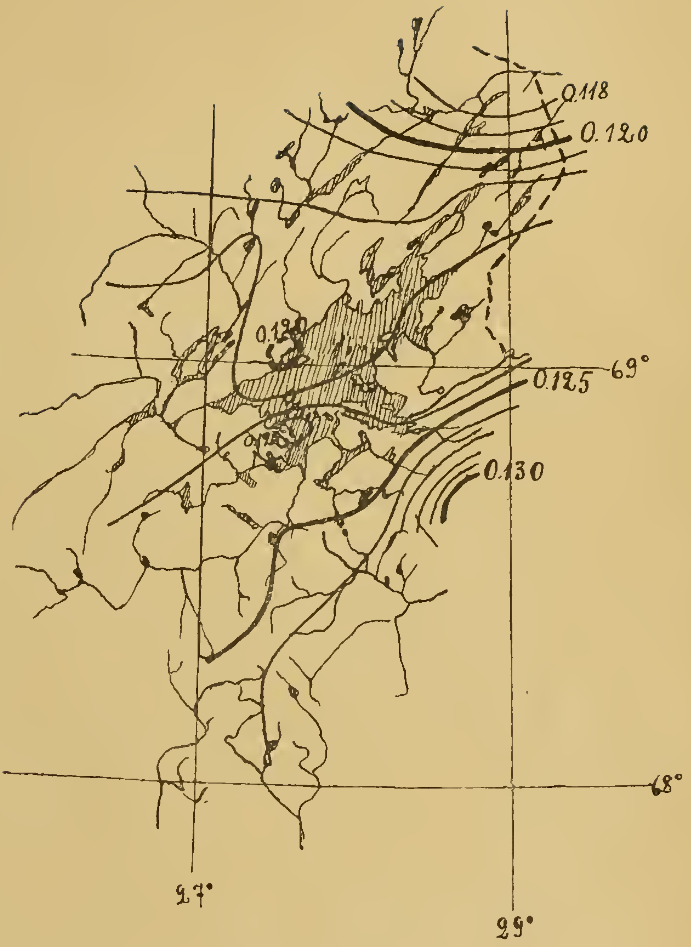
Station	Date	Mean Greenwich time	Magnet	T	v	t	ι	Δ	s	H	M	Reduction	$H_{1916.5}$	ΔH
20	15. 7	5^h 13^m — 32^m	•	3.^{s}3909	21°29.′8	23°.3	23°.9	10.2	—0^s.4	0.12338	0.17870	— 10γ	0.12328	± 6γ
		5 34 50	•	43	30. 1	24.8	24.4	10.2	"	26	65	— 5	21	
		6 54 — 74	• •	3. 4021	21 31. 8	26.4	26.8	13.5	"	291	43	+ 15	06	
		7 15 — 30	• •	10	31. 6	26.4	26.7	13.5	"	95	43	+ 10	05	
21	15. 7	14 10 — 29	• •	3. 3885	21 27. 0	28.4	27.9	14.0	"	0.12363	0.17891	— 23	0.12340	2
		14 30 — 46	• •	92	25. 4	27.0	27.7	14.0	"	66	69	— 24	42	
		14 50 — 69	•	3. 3919	21 23. 9	27.8	29.3	14.0	"	57	56	— 24	33	
		15 10 — 25	•	09	23. 9	29.6	29.4	14.0	"	64	64	— 25	39	
22	16. 7	5 46 — 68	•	3. 3994	21 36. 5	26.4	23.8	13.0	"	0.12283	0.17876	— 3	0.12280	3
		6 8 — 26	•	4018	36. 6	22.6	23.4	13.0	"	66	55	+ 1	67	
		7 10 — 29	• •	3. 4016	21 38. 4	22.4	24.3	12.8	"	61	68	+ 15	76	
		7 30 — 45	• •	40	39. 0	24.8	24.6	12.8	"	53	69	+ 18	71	
23	17. 7	4 49 — 73	•	3. 4037	21 42. 9	23.5	24.7	9.0	"	0.12234	0.17891	— 6	0.12228	4
		5 14 — 31	•	70	37. 2	26.7	25.9	9.0	"	49	54	— 2	47	
		5 35 — 56	• •	3. 4092	21 39. 2	27.2	28.3	11.8	"	31	60	+ 5	36	
		5 57 — 72	• •	109	39. 2	29.2	28.8	11.8	"	27	62	+ 10	37	
24	17. 7	13 40 — 61	• •	3. 3883	21 13. 8	30.3	29.3	12.2	0.0	0.12427	0.17840	— 62	0.12365*	6
		14 2 — 18	• •	21	12. 9	30.5	29.5	12.2	"	54	45	— 74	80*	
		14 22 — 42	•	3. 3755	21 5. 2	31.7	33.0	12.0	"	505	64	— 110	95*	
		14 43 — 58	•	80	3. 2	33.4	33.6	14.0	"	06	24	— 122	84*	
25	19. 7	12 45 — 66	• •	3. 2949	20 15. 4	25.0	23.8	11.8	0.4	0.13071	0.17872	— 5	0.13067	3
		13 8 — 27	• •	28	16. 5	21.8	23.1	11.8	"	68	88	— 12	56	
		14 28 — 58	•	39	11. 9	20.1	18.9	8.2	"	91	33	— 30	61	
26	20. 7	14 12 — 32	•	3. 3773	21 14. 0	16.9	17.0	9.5	"	0.12462	0.17798	— 1	0.12461	4
		14 32 — 48	•	66	13. 1	17.0	17.0	9.5	"	69	94	— 6	63	
		14 53 — 74	• •	3. 3732	21 14. 5	17.1	17.7	9.0	"	78	826	— 6	72	
		15 15 — 30	• •	25	13. 9	19.0	18.1	9.0	"	87	27	— 11	76	
27	21. 7	18 52 — 72	• •	3. 3493	20 56. 2	14.5	16.0	10.8	"	0.12652	0.17810	— 41	0.12611	4
		19 13 — 28	• •	91	55. 9	15.7	16.2	10.8	"	57	19	— 38	19	
		19 50 — 70	•	3. 3471	20 55. 4	14 5	13.4	11.2	"	66	12	— 34	32	
		20 10 — 26	•	89	55. 5	12.6	13.0	11.2	"	55	791	— 34	21	
28	22. 7	14 6 — 26	•	3. 3830	21 9. 6	28.4	29.1	11.2	"	0.12457	0.17807	— 20	0.12437	2
		14 28 — 44	•	63	9. 8	30.5	29.8	11.2	"	47	03	— 16	31	
		15 8 — 26	• •	3. 3840	21 12. 5	30.4	30.4	13.0	"	46	31	— 16	30	
		15 27 — 42	• •	16	12. 4	30.8	30.8	13.0	"	56	43	— 18	38	
29	25. 7	7 22 — 43	•	3. 3739	21 9. 5	21.0	21.8	10.0	"	0.12494	0.17809	+ 2	0.12496	4
		7 44 — 59	•	49	7. 6	24.4	23.0	10.0	"	504	07	+ 6	510	
		8 2 — 20	• •	3. 3771	21 11.8	24.8	25.0	13.0	"	478	28	+ 19	497	
		8 21 — 36	• •	60	11. 1	26.0	25.7	13.0	"	86	40	+ 21	507	
30	25. 7	15 26 — 44	• •	3. 3492	20 55. 2	20.9	20.9	12.5	"	0.12662	0.17840	— 54	0.12608	3
		15 46 — 60	• •	516	54. 4	20.4	20.9	12.5	"	56	19	— 59	597	
		16 2 — 21	•	3. 3536	20 52. 8	19.6	19.3	14.2	"	51	789	— 52	99	
		16 22 — 36	•	25	52. 2	18.8	19.2	14.2	"	56	88	— 59	97	
31	26. 7	15 17 — 38	• •	3. 3546	20 54. 0	19.2	19.6	14.2	"	0.12646	0.17795	— 53	0.12593	3
		15 40 — 55	• •	48	54. 4	20.2	19.7	14.2	"	46	804	— 46	600	
		16 31 — 50	•	3. 3526	20 51. 6	19.2	19.1	13.5	"	60	782	— 53	07	
		16 51 — 67	•	26	51. 9	19.2	19.4	13.5	"	58	94	— 44	14	
	27. 7	6 11 — 30	• •	3. 3551	21 0. 5	14.7	16.0	10.0	"	13	813	+ 1	14	
		6 32 — 47	• •	73	1. 4	16.3	16.2	10.0	"	04	10	+ 4	08	
32	27. 7	14 42 — 62	•	3. 3958	21 21. 6	25.1	25.8	13.2	"	0.12356	0.17801	— 39	0.12317	2
		15 3 — 18	•	57	21. 8	24.8	25.3	13.2	"	57	02	— 39	18	
		15 22 — 40	• •	3. 3923	21 26. 1	24.3	24.2	13.0	"	56	40	— 38	18	
		15 42 — 56	• •	20	25. 4	24.0	24.2	13.0	"	60	40	— 36	24	

V. Results reduced to the epoch 1916.5.

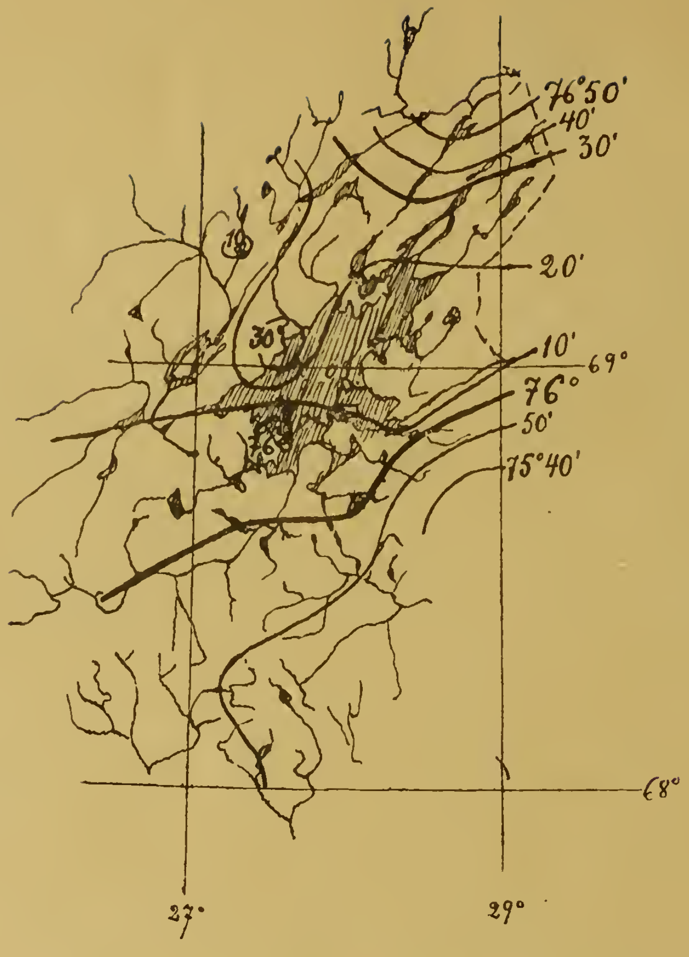
Station	Latitude	Longitude	D (+E)	I	H	X	Y	Z	T
1	68° 36.′8	27° 30.′3	1° 58.′4	75° 58.′4	0.12508	0.12101	0.00431	0.50068	0.51606
2	68 43.6	27 12.1	1 30.2	76 4.4	0.12423	0.12419	0.00326	0.50099	0.51616
3	68 51.2	27 28.1	2 8.4	75 58.2	0.12562	0.12553	0.00469	0.50271	0.51817
4	68 54.4	27 2.4	1 18.5	76 9.9	0.12363	0.12360	0.00282	0.50201	0.51701
5	69 6.0	26 34.9	1 14.2	76 11.5	0.12339	0.12336	0.00266	0.50204	0.51698
6	69 12.6	26 52.9	1 28.3	76 18.2	0.12245	0.12241	0.00314	0.50244	0.51715
7	69 4.1	27 7.1	1 20.0	76 12.7	0.12373	0.12370	0.00288	0.50418	0.51914
8	69 16.0	27 13.5	1 39.0	76 10.2	0.12362	0.12357	0.00356	0.50216	0.51715
9	68 56.9	26 38.8	0 25.2	76 13.0	0.12325	0.12325	0.00090	0.50242	0.51731
10	68 42.4	26 0.9	0 20.8	76 8.4	0.12332	0.12332	0.06075	0.49981	0.51480
11	68 44.4	26 28.3	1 34.6	76 7.4	0.12368	0.12363	0.00340	0.50064	0.51569
12	69 1.6	27 31.7	— 0 33.6	76 37.7	0.11944	0.11943	— 0.00117	0.50246	0.51646
13	69 9.7	27 51.5	2 12.1	76 21.0	0.12250	0.12241	0.00471	0.50443	0.51909
14	69 24.1	27 45.1	2 10.2	76 16.8	0.12171	0.12162	0.00461	0.49852	0.51316
15	69 30.7	28 3.8	2 35.4	76 31.2	0.12104	0.12092	0.00547	0.50494	0.51925
16	69 24.7	28 23.6	3 30.6	76 31.2	0.12148	0.12125	0.00744	0.50678	0.52114
17	69 16.5	28 3.7	2 33.3	76 21.4	0.12244	0.12232	0.00546	0.50444	0.51908
18	69 26.5	28 47.8	2 47.2	76 27.4	0.12262	0.12248	0.00596	0.50905	0.52361
19	69 36.7	28 49.6	3 39.2	76 58.1	0.11718	0.11694	0.00747	0.50628	0.51967
20	69 13.4	28 33.9	2 45.0	76 19.5	0.12315	0.12301	0 00591	0.50614	0.52091
21	69 4.7	28 26.3	2 47.8	76 14.0	0.12338	0.12323	0.00602	0.50358	0.51847
22	69 1.4	27 54.9	2 5.6	76 17.2	0.12273	0.12265	0.00448	0.50295	0.51771
23	68 54.0	28 27.3	2 48.4	76 16.3	0.12237	0.12222	9.00599	0.50091	0.51564
24	68 59.1	28 49.7	2 44.4	76 10.7	0.12381	0.12367	0.00592	0.50324	0.51825
25	68 45.9	28 32.4	2 49.6	75 38.4	0.13061	0.13045	0.00644	0.51017	0.52662
26	68 52.1	27 53.7	1 58.4	76 6.4	0.12468	0.12461	0.00429	0.50406	0.51925
27	68 31.8	28 2.0	2 10.2	75 53.0	0.12621	0.12612	0.00478	0.50185	0.51747
28	68 40.5	28 0.5	2 23.4	76 9.3	0.12434	0.12423	0.00518	0.50451	0.51961
29	68 24.0	27 24.7	1 30.1	75 57.0	0.12502	0.12498	0.00328	0.49957	0.51498
30	68 15.6	27 18.9	1 52.0	75 50.0	0.12600	0.12593	0.00410	0.49917	0.51483
31	68 1.6	27 24.9	0 42.0	75 51.1	0.12606	0.12605	0.00154	0.50008	0.51572
32	68 4.0	27 6.4	1 50.4	76 10.3	0.12319	0.12313	0.00396	0.50047	0.51541



Isogonic lines 1916.5.
The east declination is positive.



Isoclinic lines 1916.5.



Lines of equal horizontal intensity 1916.5.

3 0112 105356205